

Message Text

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PAGE 01 TOKYO 05161 080703Z

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ACTION OES-06

INFO OCT-01 EA-09 ISO-00 COME-00 /016 W

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R 080645Z APR 76

FM AMEMBASSY TOKYO

TO SECSTATE WASHDC 8313

UNCLAS TOKYO 5161

DEPT PASS TO G. LINDAMOOD, NBS

FOR OES/APT/SA

E.O. 11652: N/A

TAGS: TECH, JA

SUBJECT: X-RAY LITHOGRAPHY FOR INTEGRATED CIRCUIT PRODUCTION

1. ACCORDING TO SERIES OF ARTICLES IN JAPANESE TRADE PRESS, THE NIPPON KOGAKU K.K., MANUFACTURER OF CAMERAS (E.G., NIKON) AND OTHER OPTICAL GOODS IN JAPAN, HAS REACHED AGREEMENT WITH MIT, CAMBRIDGE, ON IMPORTATION OF TECHNOLOGY FOR "SOFT X-RAY LITHOGRAPHY EQUIPMENT" USED IN MANUFACTURING SUPER LSI'S. APPARENTLY FIRM HAS ACQUIRED THE EXCLUSIVE RIGHT TO MANUFACTURE THE EQUIPMENT DOMESTICALLY.

2. THE SUPER LSI PRINTER IS SAID TO HAVE THE FOLLOWING ADVANTAGES: IT UNDERGOES LITTLE EFFECT FROM DIFFRACTION BECAUSE OF SHORT WAVELENGTH OF SOFT X-RAYS; IT MAKES POSSIBLE "PROXIMITY PRINTING"; AND IT RESULTS IN FEW MANUFACTURING LOSSES BECAUSE IT IS NOT AFFECTED TO ANY GREAT EXTENT BY SMALL DUST PARTICLES.

3. COMMENT: EMBOFFS HAVE BEEN ALERTED TO THIS DEVELOPMENT BY PROMINENT U.S. COMPUTER MANUFACTURER WITH TOKYO OFFICE. U.S. COMPANY'S TECHNICAL REP HERE STATES THAT IN HIS OPINION THIS IS SIGNIFICANT TRANSFER OF TECHNOLOGY AND PROCESS MAY BE SUPERIOR TO ELECTRON BEAM LITHOGRAPHY. HE WONDERS IF AMERICAN COMPANIES HAD BEEN GIVEN ACCESS PREVIOUSLY TO THIS TECHNOLOGY BY MIT. SUBJECT WAS ALSO DISCUSSED WITH LINDAMOOD (DOC/NBS) DURING HIS RECENT VISIT TO JAPAN.

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4. ACTION REQUESTED: PRIMARILY FOR BACKGROUND, EMBASSY WOULD APPRECIATE RECEIVING ANY INFORMATION AVAILABLE ON NATURE OF MIT LICENSING ARRANGEMENT. IS TECHNOLOGY COVERED BY U.S. PATENT? JAPANESE PATENT? WAS PROCESS DEVELOPED UNDER PRIVATE OR USG SPONSORSHIP? HAS MIT LICENSED U.S. COMPANIES TO USE PROCESS? SUCH INFO WOULD ASSIST EMBASSY IN DETERMINING WHAT KINDS OF TECHNOLOGY TRANSFER CASES IN JAPAN ARE OF INTEREST AND IMPORTANCE TO USG. INFO RECEIVED WILL BE PASSED ON TO U.S. COMPUTER MANUFACTURER IF AGREEABLE TO DEPT.
HODGSON

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Message Attributes

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Margaret P. Grafeld
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